STEREO AUTO REVERSE DOUBLE CASSETTE DECK

X-3WX

SERVICE MANUAL

KENWOOD

KENWOOD CORPORATION

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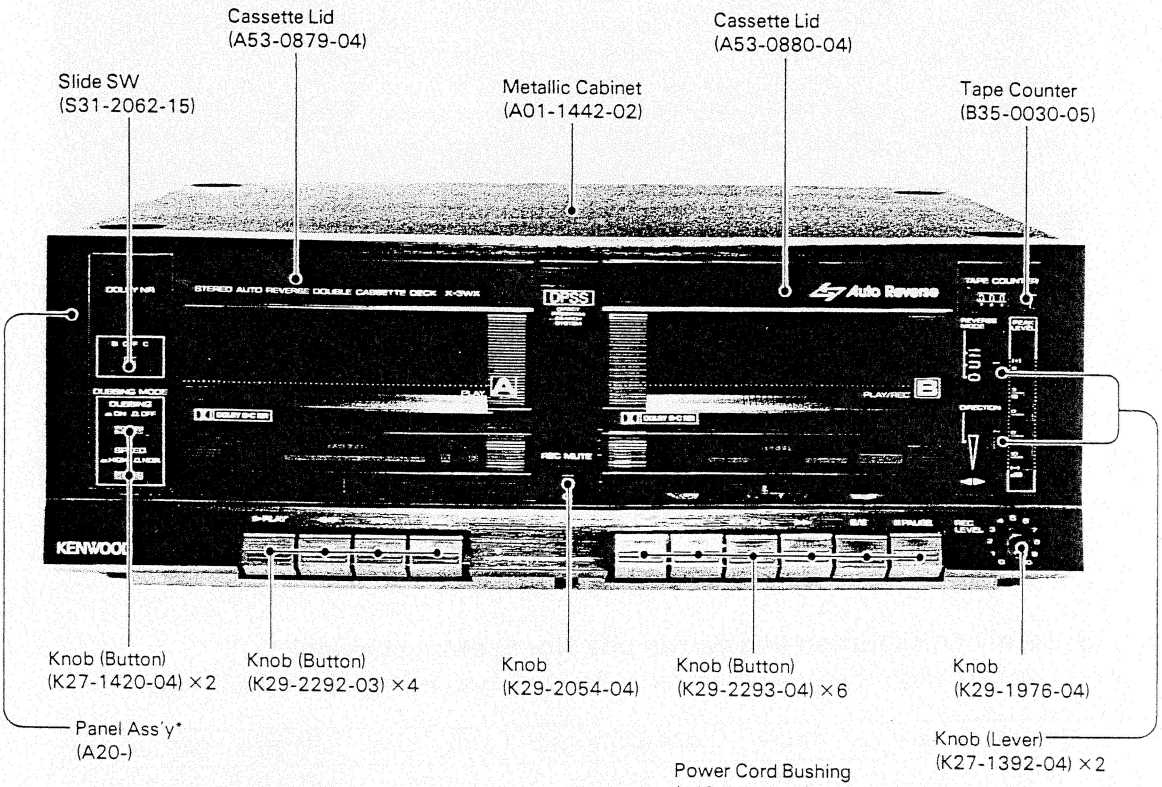
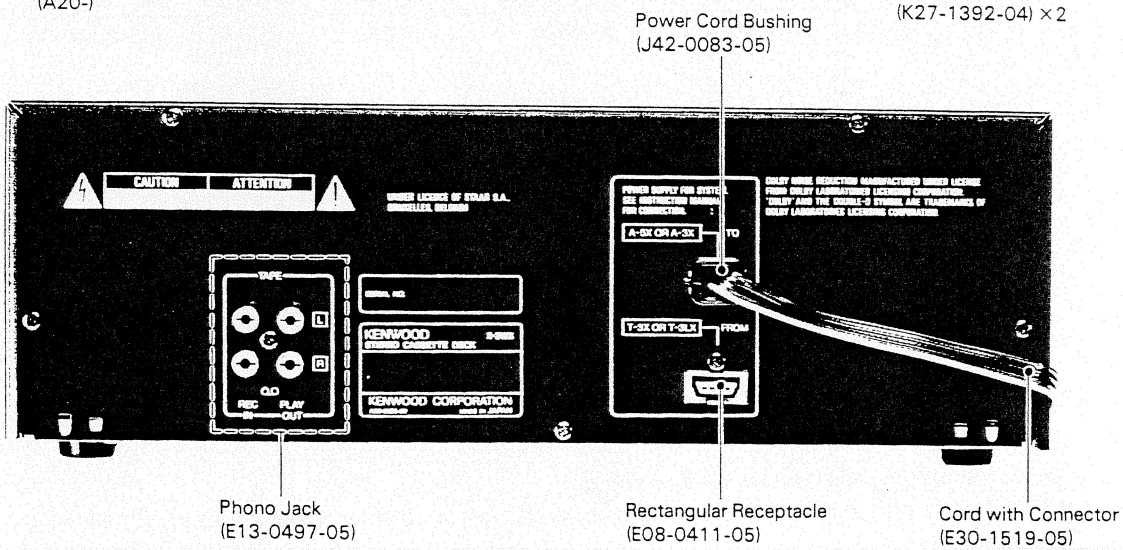




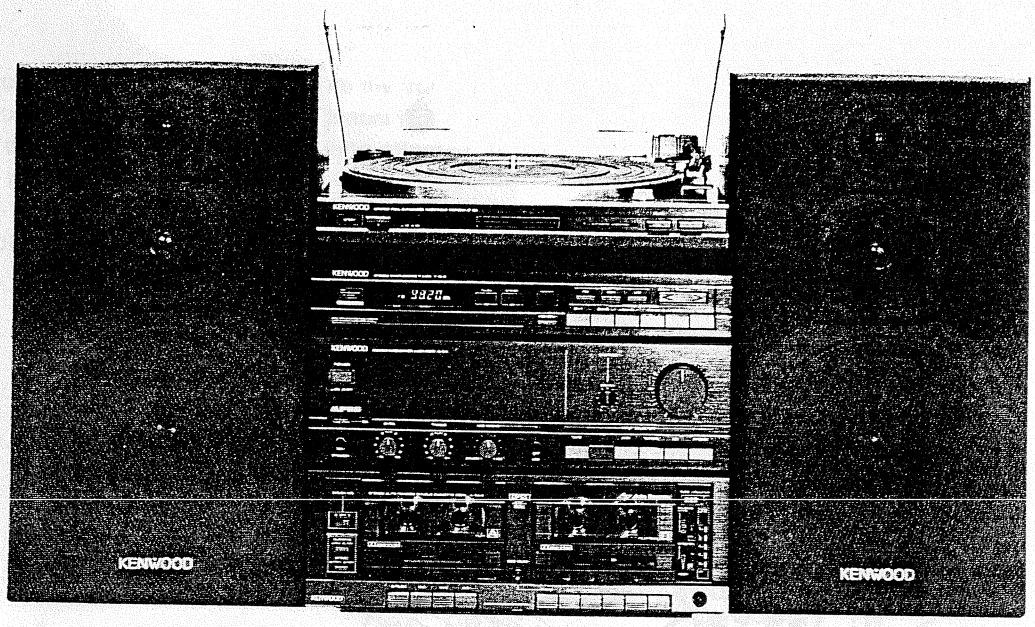
Precautions on Servicing

In the MIDI M-30/40/50/50X system, the power supply section is incorporated in the A-3X or A-5X amplifier and is not on the X-5WX.

When servicing the X-3WX, supply the power from the A-3X or A-5X amplifier using the exclusive connector cord.

* Refer to Parts List on page 15.

X-3WX



In order of top photo
P-3X
T-3LX
A-3X
X-3WX
S-3X (SPEAKERS)

Photo is MIDI M-30.

System configuration and carton box (for system packing).

The system configuration and system packing carton box except speakers are as follows.

SYSTEM	AMP	TUNER	CASSETTE DECK	TURNTABLE	SPEAKER	CARTON BOX
M-30	A-3X	T-3LX/3X	X-3WX	P-3X	S-3X	H03-0878-04
M-40	A-3X	T-7LX/7X	X-3WX	P-5X	S-3X	—
M-50	A-5X	T-7LX/7X	X-5WX	P-5X	S-5X	H03-0879-04
M-50X	A-5X	T-7LX/7X	X-3WX	P-5X	S-5X	—
M-70	A-7X	T-7LX/7X	X-7WX	P-7X	S-7VX	H03-0880-04

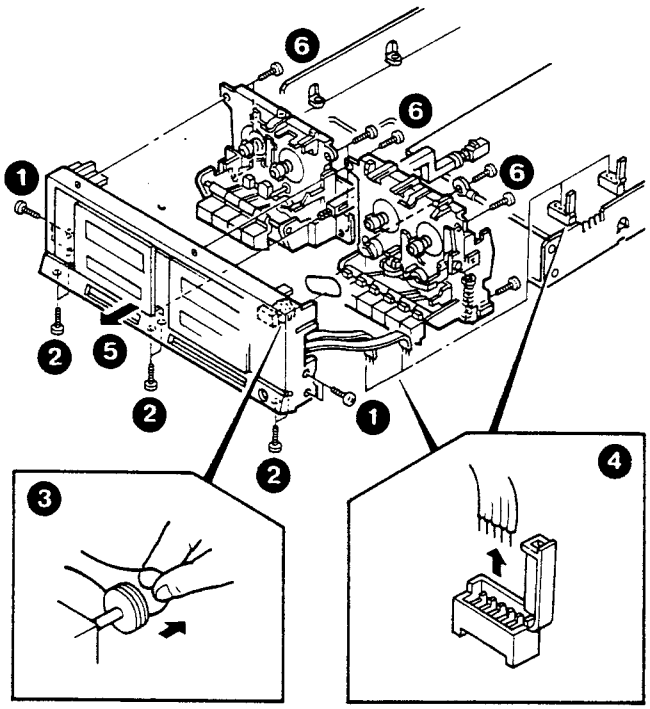
Power Supplying Method When Servicing

Since the X-3WX do not have the power supply section, supply the power with any of the following methods:

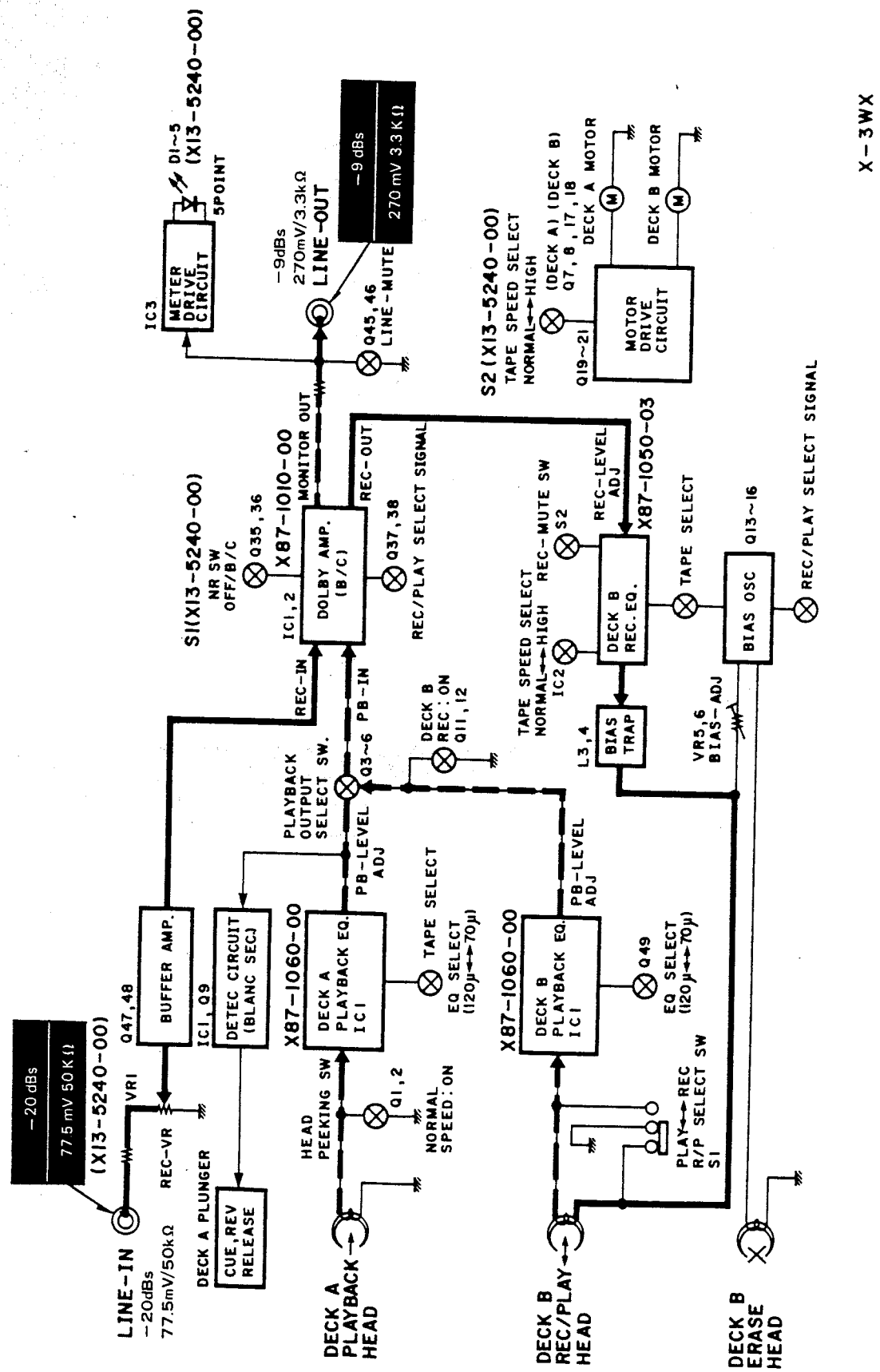
1. Supply the power from the MIDI system amplifier (A-3X or A-5X) using the exclusive connector cord.
2. Supply the DC power to the test point (DC) on the P.C. board. **(D.C. 19 V)**
3. Supply the AC power to the test point (AC) on the P.C. board. **(A.C. 21 V)**

DISASSEMBLY FOR REPAIR

1. Remove the screws (❶ and ❷) from the front panel.
2. Remove the belt (❸) and the connectors (❹).
3. Pull out the front panel (❺), paying attention to the REC MUTE knob.
4. Remove the A and B mechanism screws (❻), then remove the mechanisms.



BLOCK LEVEL DIAGRAM



CIRCUIT DESCRIPTION

Function of Components

Recording/Playback Unit (X28-1750-81)

Component	Use/Function	Operation/Conditions/Interchangeability
Q1, 2	Deck A playback head peaking capacitor selection	Normal Speed: ON High speed: OFF
Q3~6	Playback amp. A/B selection	Deck A PLAY: Q3, 4 ON STOP and Deck B PLAY: Q5, 6 ON
Q7, 8	Deck A motor speed selection	Normal speed: Q7, 8 ON High speed: Q7, 8 OFF
Q9	Deck A program selection operation plunger driving	During program selection operation (Cue, Rev.): Q9 ON
Q11, 12	Dubbing bias leakage protection circuit	Deck B REC: Q11, 12 ON
Q13	Bias generation circuit	
Q14, 15	Bias current selection	Normal tape: Q14, 15 OFF Chrome tape: Q14 OFF, Q15 ON Metal tape: Q14 ON, Q15 OFF
Q16	Bias ON/OFF selection	Deck B REC: Q16 ON (bias generation) STOP, PLAY: Q16 OFF
Q17, 18	Deck B motor speed selection	Normal speed: Q17, 18 ON High speed: Q17, 18 OFF
Q19, 20	Deck B motor control circuit	Dubbing SW OFF A Deck STOP: Q19 ON, Q20 OFF A Deck PLAY: Q19 OFF, Q20 ON Dubbing SW ON A Deck STOP: Q19 OFF, Q20 ON A Deck PLAY: Q19 ON, Q20 OFF
Q21	Deck B motor control circuit	Deck B REC or dubbing SW ON (Deck A PLAY): Q21 ON→Q20 OFF, Q19 ON Dubbing SW ON (Deck A STOP), turntable (P-3S) or CD player (DP-7S) PLAY: Q21 ON→Q20 OFF, Q19 ON
Q22	Deck B tape direction indicator selection	FORWARD: Q22 OFF REVERSE: Q22 ON
Q23~26	Playback amp A/B selection control circuit	Deck A PLAY: Q23, 24, 26 ON, Q25 OFF→Q3, 4 ON STOP and Deck B PLAY: Q23, 24, 26 OFF, Q25 ON→Q5, 6 ON
Q27	Deck A STOP/PLAY selection mute signal	Deck A STOP: Q27 OFF PLAY: Q27 ON

CIRCUIT DESCRIPTION

Recording/Playback Unit (X28-1750-81)

Component	Use/Function	Operation/Conditions/Interchangeability
Q28, 29	Muting circuit	Deck A STOP→PLAY or PLAY→STOP Dubbing SW OFF→ON or ON→OFF Deck A FF, REW or program selection operation: Deck A and B STOP: Q28, 29 ON
Q30, 33	Dubbing SW ON/OFF selection mute signal	Dubbing SW OFF, Deck A PLAY: Dubbing SW ON: Q30, 33 ON
Q31	Muting control circuit	Dubbing SW OFF: Dubbing SW ON (Deck A STOP), turntable (P-3S) or CD player (DP-7S) PLAY: Q31 ON
Q32	Muting control circuit	Q33, 34 OFF, Deck B REC or PLAY: Q32 ON
Q34	Muting control circuit	Deck A PLAY: Q34 ON STOP and Deck B PLAY: Q34 OFF
Q35	Dolby selection signal control circuit	Q36 OFF, Deck A PLAY: Q35 ON (Dolby OFF)
Q36, 38	REC/PLAY selection signal control circuit	Dubbing SW OFF: QW36 ON→Q35 OFF Dubbing SW ON, turntable (P-3S) or CD player (DP-7S) PLAY: Q38 ON→Q37 OFF
Q37	REC/PLAY selection signal control circuit	Q38 OFF, Deck A PLAY: Q3 ON (Dolby playback mode)
Q39, 40	Muting circuit	Q40 OFF: Q39 OFF (mute OFF) Q40 ON: Q39 ON (mute ON)
Q41	Muting control circuit	Deck A PLAY: Q41 ON→Q40 OFF Deck B PLAY or REC: Q39 OFF (mute OFF)
Q42	Power ON/OFF muting control circuit	Power OFF: Q42 OFF Power ON: Q42 ON
Q43	Motor system power supply ripple filter	
Q44	Signal system power supply ripple filter	
Q45, 46	Line muting circuit	Q29 ON or Q39 ON: Q45, 46 ON (mute ON)

CIRCUIT DESCRIPTION

Recording/Playback Unit (X28-1750-81)

Component	Use/Function	Operation/Conditions/Interchangeability
Q47, 48	Line input buffer amp	Emitter follower circuit (voltage gain = 0 dB)
Q49	Deck B tape selector circuit	Normal, chrome: Q49 OFF Metal: Q49 ON
Q52~54	Constant voltage power supply	
IC1	Deck A program selection plunger control	1 pin: Deck A playback signal input pin (L + R) 6 pin: Plunger control signal When Deck A playback signal is present: L level When playback signal is not present: H level
IC2	Deck B recording equalizer selection circuit	1, 2 pins: normal speed — H level 3, 4 pins: high speed — H level 5 pin: GND 6 pin: normal speed, chrome tape — H level 7 pin: normal speed, metal tape — H level 8 pin: high speed, chrome tape — H level 9 pin: high speed, metal tape — H level
IC3	Level meter circuit	2 pin: L channel line signal input pin 3 pin: R channel line signal input pin 9 pin: —10 dB indicator (LED on when at H level) 10 pin: —5 dB indicator (LED on when at H level) 11 pin: 0 dB indicator (LED on when at H level) 12 pin: +3 dB indicator (LED on when at H level) 13 pin: +6 dB indicator (LED on when at H level)

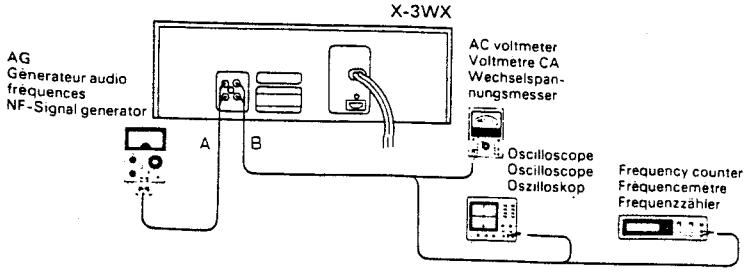
Daughter Units

Component	Use/Function	Operation/Conditions/Interchangeability
X87-1010-00 IC1, 2	Dolby amp unit Dolby amp circuit	29 pin: REC/PLAY selection 0 V — PLAY mode (Dolby decoder operation) 4.1 V — REC mode (Dolby encoder operation) 30 pin: Dolby selection 4.6 V — Dolby OFF 7.5 V — Dolby B ON 10.2 V — Dolby C ON
X78-1050-03 Q1 Q2 IC1	Recording amp unit Record muting circuit Recording amp circuit Recording equalizer selection circuit	X28-1750-00 Q29 or Q39 ON, SW2 ON (REC-MUTE): Q1 ON (REC mute ON) Emitter ground amplification circuit Controlled by X28-1750-81 IC2
X87-1060-00 Q1, 2 IC1	Playback amp unit Playback NAB constant selection circuit Playback amp circuit	Normal tape: OFF (3180 μ, 120 μ) Chrome, metal tape: ON (3180 μ, 70 μ)

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	CASSETTE TAPE DECK SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
CASSETTE DECK SECTION		TAPE: NORMAL, DOLBY: OFF, INPUT: LINE				0dBs = 0.775V	
I REC/PLAY HEAD							
[1]	DEMAGNETIZATION	–	–	POWER: OFF Remove the cassette door.	REC/PLAY head	Demagnetize the REC/PLAY head with a head demagnetizer.	
[2]	CLEANING	–	–	PLAY	REC/PLAY head erase head, capstan, pinch roller.	Clean the REC/PLAY head erase head, capstan and pinch roller using a cotton swab slightly damped with alcohol.	
[3]	AZIMUTH	MTT-114 10kHz,-10dB	(B)	PLAY	Azimuth adjustment screw	Maximum output.	
II PC BOARD (X28-1750-00)							
<i>	TAPE SPEED (HI SPEED)	MTT-111 3kHz	(B)	Connect a jumper between GND and TP1(TP2). PLAY	DECK A: VR2 DECK B: VR4	Adjust the tape speed so that a 6kHz signal is produced at the center of the tape.	
<ii>	TAPE SPEED (NORMAL)	MTT-111 3kHz	(B)	PLAY	DECK A: VR1 DECK B: VR3	Adjust the tape speed so that a 3kHz signal is produced at the center of the tape.	
III PC BOARD (X87-1060-00)							
<1>	PLAYBACK LEVEL	(a) MTT-150 400Hz	(B)	PLAY	DECK A: VR1 (L) VR2 (R) DECK B: VR1 (L) VR2 (R)	Output level: -6.0dBs	
		(b) MTT-256 315Hz				Output level: -9.0dBs	
		(c) MTT-256U 315Hz				Output level: -5.0dBs	
<2>	BIAS CURRENT	(A) 1kHz,-30dBs 10kHz,-30dBs	(B)	Adjust VR1 so that the REC monitor output becomes -29dBs at 1kHz, then record and reproduce signal of 1kHz and 10kHz in alternation.	(X28-1750) VR5 (L) VR6 (R)	Record 1kHz and 10kHz in alternation and adjust the variable resistors which control the bias current so that the same playback level is obtained.	
<3>	RECORD LEVEL	(A) 1kHz,-10dBs	(B)	Record and reproduce a 1kHz signal under the conditions set in <2>.	(X87-1050) VR1 (L) VR1 (R)	Adjust the variable resistors so that a playback level of -9dBs is obtained.	

SYSTEM CONNECTIONS



REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU MAGNETO-PHONE A CASSETTE	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION DU MAGNETOPHONE		TAPE: NORMAL, DOLBY: OFF, ENTREE: LINE					0dBs = 0.775V
I TETE D'ENREGISTREMENT/LECTURE							
[1]	DEMAGNETISATION	–	–	POWER: OFF Eloigner la porte.	Tête D'ENREGISTREMENT/ LECTURE	Demagnétiser la tête D'ENREGISTREMENT/LECTURE avec un démagnétiseur de tête.	
[2]	NETTOYAGE	–	–	PLAY	Tête D'ENREGISTREMENT/ LECTURE tête d'effacement, cabestan, galetpresseur.	Nettoyer la tête D'ENREGISTREMENT/LECTURE la tête d'effacement, le cabestan et le galetpresseur avec un coton-tige légèrement imbibé d'alcool.	
[3]	AZIMUT	MTT-114 10kHz.-10dB	(B)	PLAY	Vis d'azimut	Sortie maximer.	
II PLAQUE IMPRIMEE (X28-1750-00)							
<i>	VITESSE DE DEFILEMENT (HI SPEED)	MTT-111 3kHz	(B)	Connecter un cablage entre les GND et TP1(TP2). PLAY	DECK A: VR2 DECK B: VR4	Régler la vitesse de bande de façon qu'un signal de 6kHz soit produit au centre de la bande.	
<ii>	VITESSE DE DEFILEMENT (NORMAL)	MTT-111 3kHz	(B)	PLAY	DECK A: VR1 DECK B: VR3	Régler la vitesse de bande de façon qu'un signal de 3kHz soit produit au centre de la bande.	
III PLAQUE IMPRIMEE (X87-1060-00)							
<1>	NIVEAU DE LECTURE	(a) MTT-150 400Hz	(B)	PLAY	DECK A: VR1 (G) VR2 (D) DECK B: VR1 (G) VR2 (D)	Niveau de sortie: -6.0dBs	
		(b) MTT-256 315Hz				Niveau de sortie: -9.0dBs	
		(c) MTT-256U 315Hz				Niveau de sortie: -5.0dBs	
<2>	COURANT DE POLARISATION	(A) 1kHz.-30dBs 10kHz.-30dBs	(B)	Régler VR1 de façon que la sortie de moniteur REC soit de -29dBs à 1kHz, puis en registrer et reproduire des signaux de 1kHz et 10kHz en alternance.	(X28-1750) VR5 (G) VR6 (D)	Enregistrer un signal de 1kHz et 10kHz en alternance et ajuster les résistances variables qui commandent le courant de polarité de façon à obtenir le même niveau de lecture.	
<3>	NIVEAU D'ENREGISTREMENT	(A) 1kHz.-10dBs	(B)	Enregistrer et reproduire un signal de 1kHz dans les conditions précisées en <2>.	(X87-1050) VR1 (G) VR1 (D)	Ajuster les résistances variables de façon à obtenir un niveau de lecture de -9dBs.	

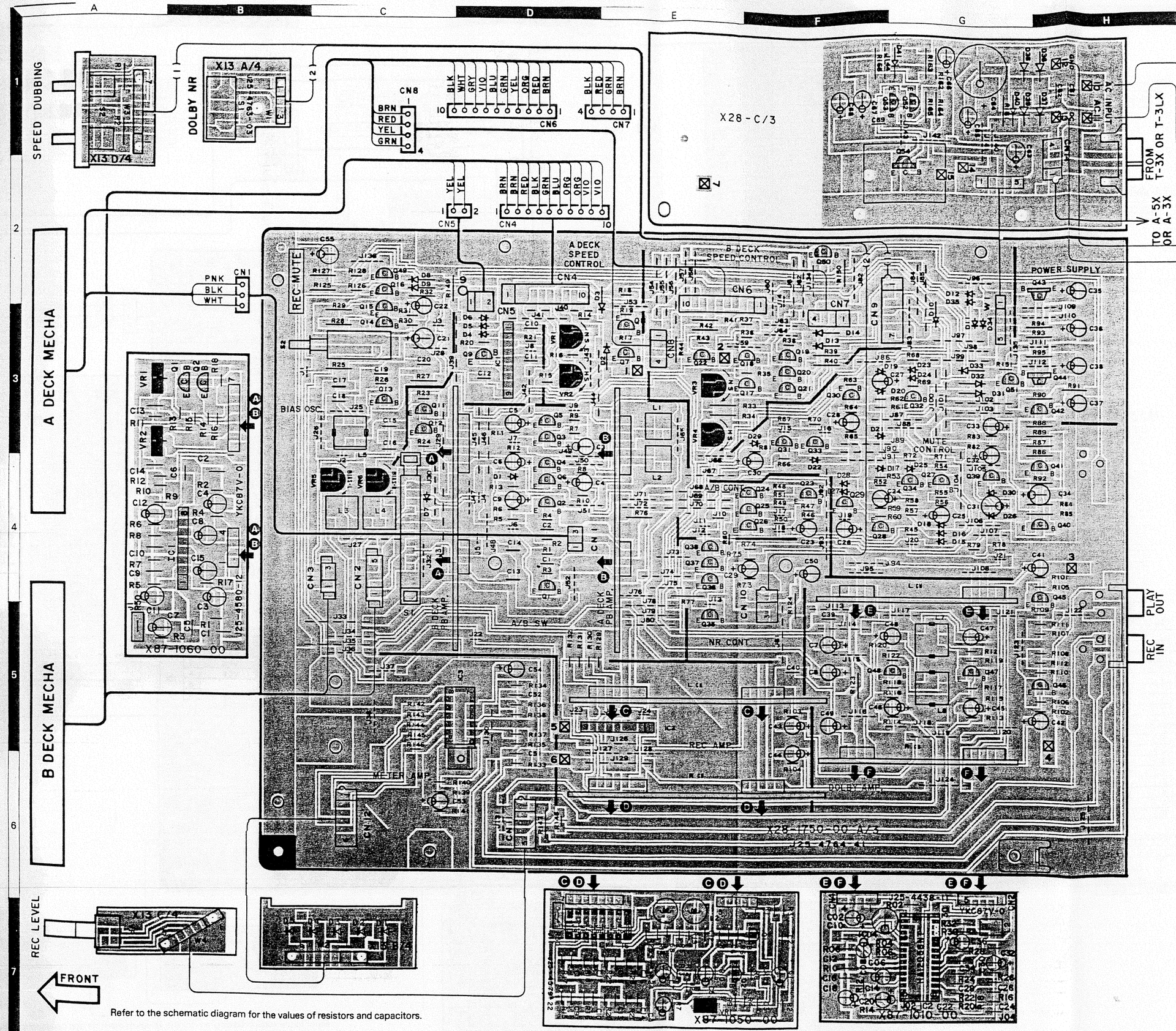
ABGLEICH

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	KASSETTENGERÄT-EINSTELLUNG	ABGLEICH PUNKTE	ABGLEICHEN FÜR	ABB.
CASSETTEN-DECK-ABTEILUNG TAPE: NORMAL, DOLBY: OFF, EINGANG: LINE						0dBs = 0,775V	
I AUFNAHME/WIEDERGABE-KOPF							
[1]	ENTMAGNETI-SIERUNG	–	–	POWER: OFF Den Kassettenfach deckel oben herausziehen.	AUFNAHME/ WIEDERGABE-Kopf	Entmagnetisierung von dem AUFNAHME/WIEDERGABE-Kopf mit einem Tonkopf Entmagnetisierungsdrossel.	
[2]	REINIGUNG	–	–	PLAY	AUFNAHME/ WIEDERGABE-Kopf Löschkopf, Tonwelle, Andruckrolle.	AUFNAHME/WIEDERGABE-Kopf, Löschkopf, Tonwelle und Andruckrolle mit einem leicht mit Alkohol befeuchteten Wattebausch reinigen.	
[3]	AZIMUT-EINSTELLUNG	MTT-114 10kHz,-10dB	(B)	PLAY	Azimut-Einstellschraube	Maximal Ausgang.	
II GEDRUCKTE SCHALTPLATTE (X28-1750-00)							
<i>	BANDGESCH-WINDIGKEIT (HI SPEED)	MTT-111 3kHz	(B)	Einen Schaltdraht zwischen GND und TP1(TP2) anschließen. PLAY	DECK A: VR2 DECK B: VR4	Die Bandgeschwindigkeit so justieren, daß ein 6kHz Signal auf der Mitte des Bands erzeugt wird.	
<ii>	BANDGESCH-WINDIGKEIT (NORMAL)	MTT-111 3kHz	(B)	PLAY	DECK A: VR1 DECK B: VR3	Die Bandgeschwindigkeit so justieren, daß ein 3kHz Signal auf der Mitte des Bands erzeugt wird.	
III GEDRUCKTE SCHALTPLATTE (X87-1060-00)							
<1>	WIEDERGABE-PEGEL	(a) MTT-150 400kHz	(B)	PLAY	DECK A: VR1 (L) VR2 (R) DECK B: VR1 (L) VR2 (R)	Ausgangspegel: -6,0dBs	
		(b) MTT-256 315kHz				Ausgangspegel: -9,0dBs	
		(c) MTT-256U 315kHz				Ausgangspegel: -5,0dBs	
<2>	LEERLAUFSTROM	(A) 1kHz,-30dBs 10kHz,-30dBs	(B)	VR1 so justieren, daß der REC Monitorausgang -29dBs bei 1kHz wird, und danach abwechselnd Signale von 1kHz und 10kHz aufnehmen und wiedergeben.	(X28-1750) VR5 (L) VR6 (R)	Signale von 1kHz und 10kHz abwechselnd aufnehmen und die Regelwiderstände, die den Vormagnetisierugsstrom regeln, so justieren, daß der gleiche Wiedergabepegel erzielt wird.	
<3>	AUFNAHMEPEGEL	(A) 1kHz,-10dBs	(B)	Ein 1kHz Signal unter den in Punkt <2> beschriebenen Bedingungen aufnehmen und reproduzieren.	(X87-1050) VR1 (L) VR1 (R)	Die Regelwiderstände so justieren, daß ein wiedergabepegel von -9dBs erzielt wird.	

X-3WX

PC BOARD

COMPONENT SIDE VIEW



X28-1750-81

IC1	1	0.8V
	2	0.7V
	3	–
	4	13.3V
	5	0V
	6	–
	7	–
	8	0V
	9	2.0V
IC3	1	0V
	4	2.8V
	5	2.8V
	8	13.9V

X87-1010-00

X28-1750-81

X87-1060-00 (DECK A)

IC1	1	1.3V
	2	0.8V
	3	3.7V
	4	9.3V
	5	–
	6	4.2V
	7	0.8V
	8	1.3V

X87-1060-00 (DECK B)

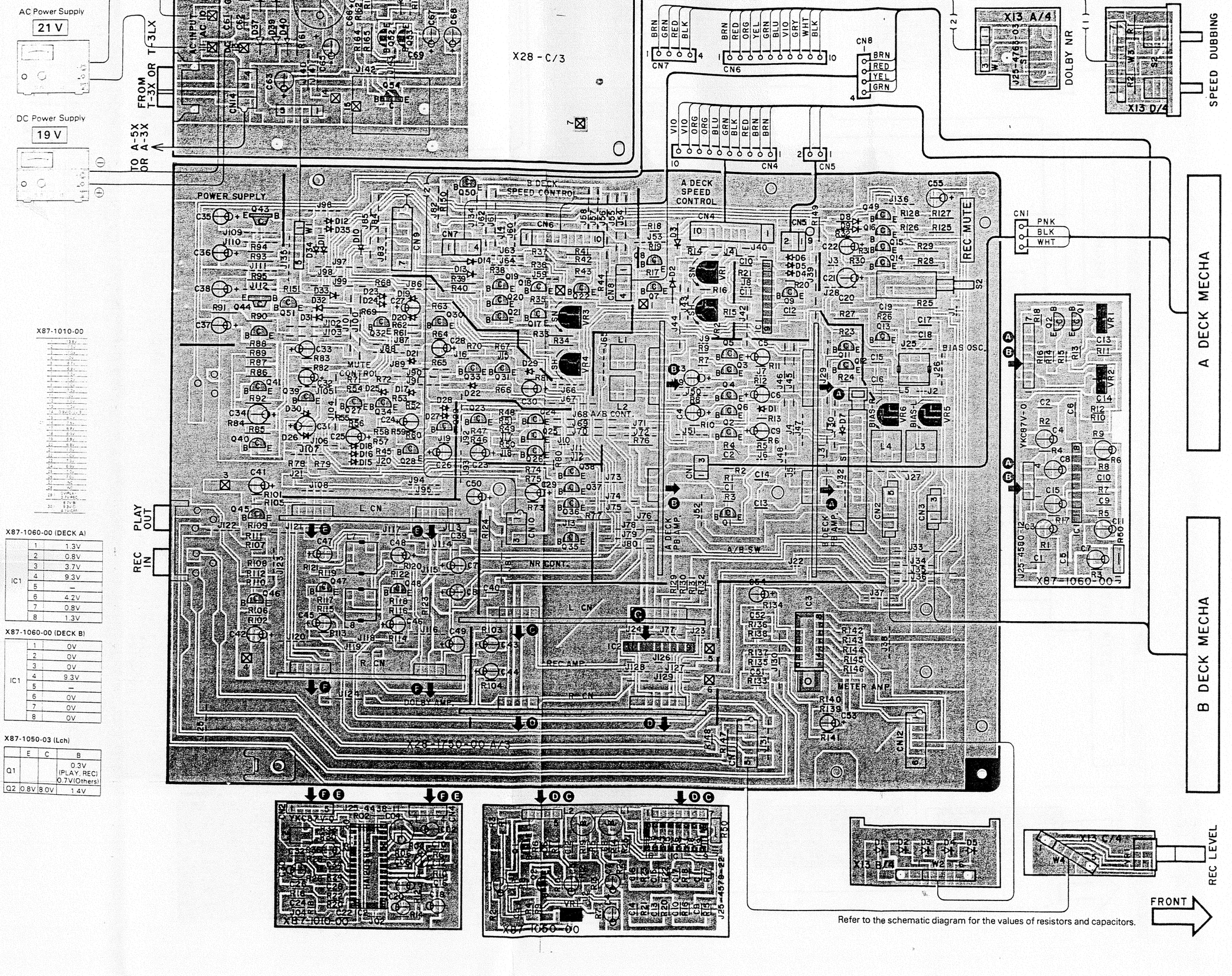
IC1	1	0V
	2	0V
	3	0V
	4	9.3V
	5	–
	6	0V
	7	0V
	8	0V

X87-1050-03 (Lch)

	E	C	B
Q1			0.3V (PLAY, REC) 0.7V(Others)
Q2	0.8V	8.0V	1.4V

Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD
FOIL SIDE VIEW



X28-1750-81

IC1	1	0.8V
	2	0.7V
	3	—
	4	13.3V
	5	0V
	6	—
	7	—
	8	0V
	9	2.0V
IC3	1	0V
	4	2.8V
	5	2.8V
	8	13.9V

X28-1750-81

Q1	1.0 V(H) 0.7V(L)	5.4 V(H) 3.3 V(L)	1.6 V(H) 0 V(L)
Q8	—	—	0 V(H) 0 V(L)
Q9		A DECK 0 V (PLAY) 1.2 V (FF, REW)	A DECK 0.7 V (PLAY) 0 V (Others)
Q11,12		—	0.7 V (REC)
Q13	4.5 V(H) 3.6 V(D) 3.1 V(N) 1.3 4 V (REC OFF)	—	—
Q14			4.7 V(D)
Q15			0.6 V (REC) 5.0 V (Others)
Q16			0.6 V (REC)
Q17	1.0 V(H) 0.6 V(N)	—	7.2 V(H) 7.1 V(N)
Q18	—	12.8 V(H) 0 V(N)	—
Q19	11.7 V (ON) 12.0 V (OFF)	13.4 V STOP 13.0 V (Others) 13.4 V STOP 2.4 V REC, PLAY	—
Q20			
Q21	—	—	0.7 V (REC DUB) A DECK PLAY
Q22	0V	0.6 V (DUB) 1.4 V (Others)	0.6 V (DUB) 0 V (Others)
Q24	—	—	13.2 V (PLAY) 12.8 V (DUB) 14 V (Others)
Q25	—	0 V (DUB) 1.4 V (Others)	—
Q26	—	13.8 V (DUB) 0 V (Others)	—
Q27	—	—	0.7 V (DUB) 0 V (Others)
Q28	—	—	0.7 V (DUB) 0 V (Others)
Q30	0V	1.4V	—
Q35	—	—	0.7 V (DUB) 0 V (Others)
Q38			0.3 V (DUB) 0.7 V (Others)
Q39	13.7 V (REC) 12.3 V (Others)	0 V (PLAY, REC) 13.3 V (Others)	13.6 V (REC) 1.4 V (PLAY) 12.6 V (Others)
Q41	0V	0 V (PLAY, REC) 2.3 V (Others)	0.7 V (PLAY, REC) 0 V (Others)
Q42	0V	0V	0.6 V (PLAY, REC)
Q43	13.2V	13.3V	13.9V
Q44	1.4V	13.3V	1.4 V
Q47	4.4V	10.5V	5.0V
Q48	4.4V	10.5V	5.0V

X87-1060-00 (DECK A)

IC1	1	1.3V
	2	0.8V
	3	3.7V
	4	9.3V
	5	—
	6	4.2V
	7	0.8V
	8	1.3V

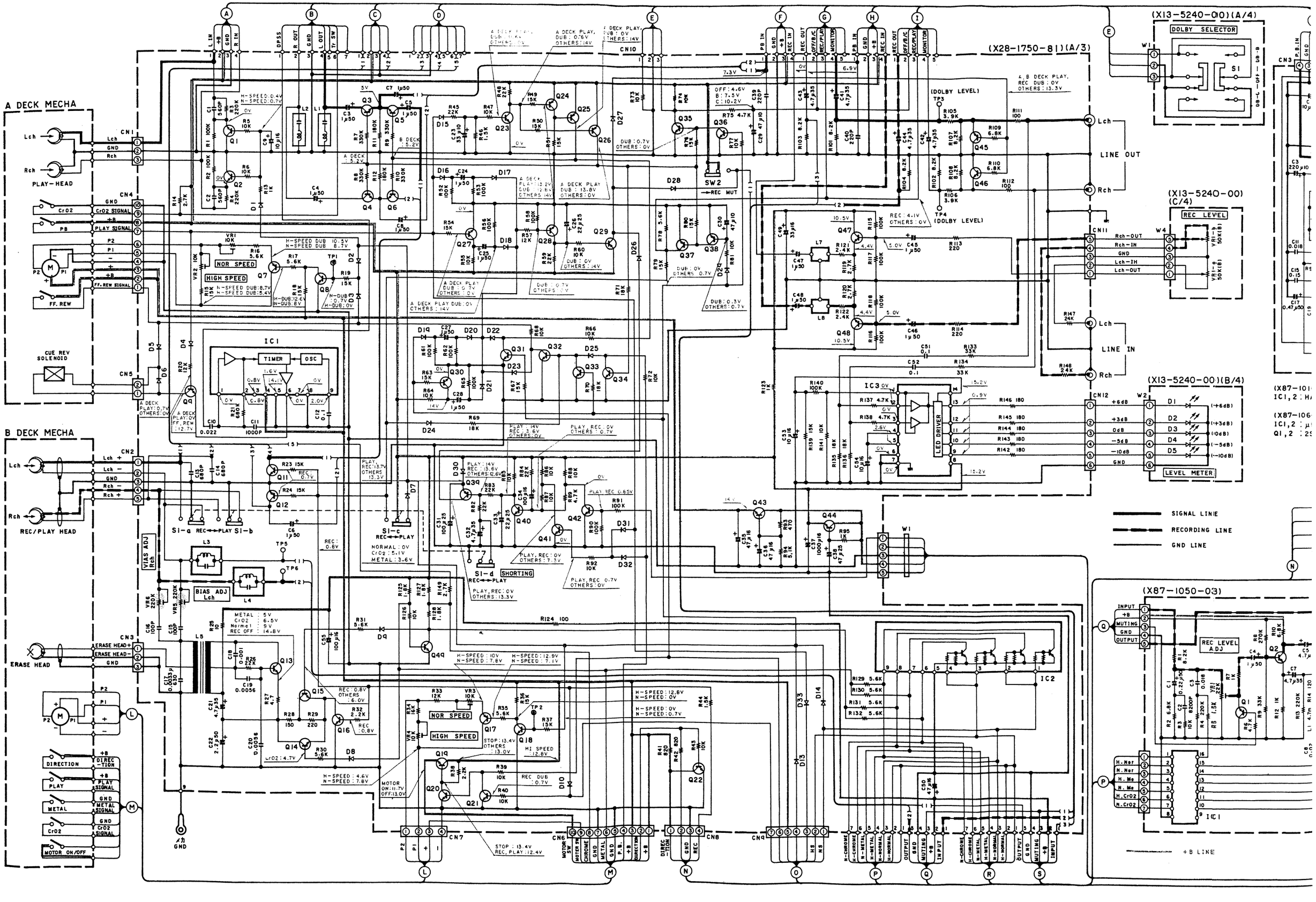
X87-1060-00 (DECK B)

IC1	1	0V
	2	0V
	3	0V
	4	9.3V
	5	—
	6	0V
	7	0V
	8	0V

X87-1050-03 (Lch)

	E	C	B
Q1			0.3V (PLAY, REC) 0.7V (Others)
Q2	0.8V	8.0V	1.4V

Refer to the schematic diagram for the values of resistors and capacitors.


A DECK MECHA
B DECK MECHA
(X28-1750-81)(A/3)
(X13-5240-00)(A/4)
DOLBY SELECTOR
(X13-5240-00)(C/4)
REC LEVEL
(X13-5240-00)(B/4)
LEVEL METER
(X87-1050-03)
REC LEVEL ADJ
LINE OUT
LINE IN
PLAY-HEAD
REC/PLAY HEAD
ERASE HEAD
CUE REV SOLENOID
IC1
TIMER
OSC
IC2
IC3
LED DRIVER
NOR SPEED
HIGH SPEED
SW2
REC MUT
VIAS ADJ Rch
BIAS ADJ Lch
SIGNAL LINE
RECORDING LINE
GND LINE
+B LINE

(X87-1010-00)
IC1, 2 : HAI2058NT

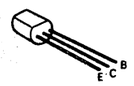
(X87-1060-00)
IC1, 2 : μPC1228HA
Q1, 2 : 2SC1740S(Q, R) or 2SC1685(R, S)

(X28-1750-81)
IC1 : AN6263N
IC2 : TD62554S
IC3 : LB1416

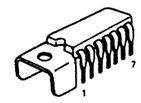
Q1~6, 8, 11, 12, 18, 20~23, 27, 28, 30~38, 40~42, 49 : 2SC1740S(Q, R) or 2SC945(A)(Q, P)
Q7, 17, 24~26, 29, 39 : 2SA933S(Q, R) or 2SA733(A)(Q, P)
Q9, 14~16 : 2SC2320(E, F)
Q13, 19 : 2SD863
Q43, 44 : 2SC2167
Q45, 46 : 2SD1302(S)
Q47, 48 : 2SC1845(F, E)

D1~10, 13~33 : 1SS133 or 1SS176

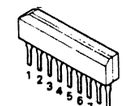
2SA733(A)
2SC1685
2SC1845
2SC1980
2SC2320
2SC945(A)
2SD1302
2SD863



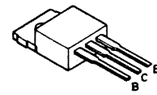
LB1416



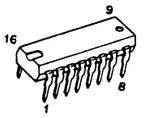
TD62554S



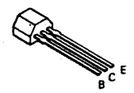
2SC2167
2SD1266



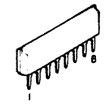
BA6251



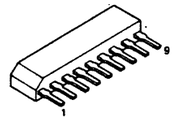
2SA933S
2SC1740S



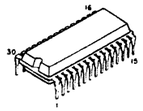
UPC1228HA



AN6263N



HA12058NT



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance, une cassette étant insérée en mode du lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.
Les tensions c.c. du circuit de polarité doivent être mesurées, l'appareil étant en mode d'enregistrement.

Die angegebenen Gleichspannungswerte wurden bei eingesetzter Cassette in der Wiedergabe mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die angegebenen Gleichspannungswerte der Vormagnetisierungsschaltung wurden in der Aufnahme-Betriebsart gemessen.

X-3WX
KENWOOD

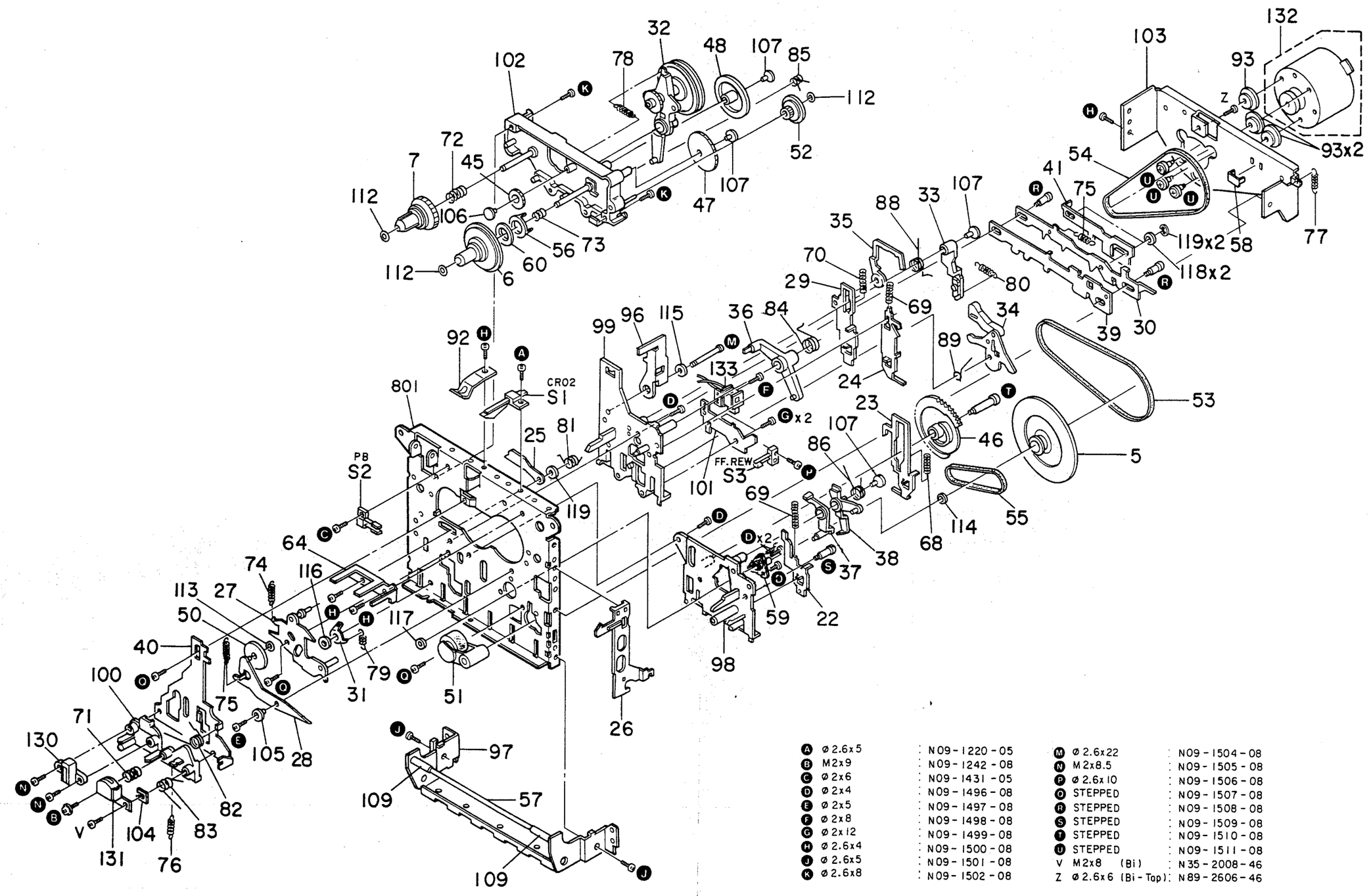
EXPLODED VIEW(MECHANISM)

A		: N09-1487-08	M	W (3x1.7x0.5)	: N19-0930-08
B	M1.6x5.5	: N09-1488-08	N	W (1.7x3.5x0.2)	: N19-0931-08
C	ø2x5	: N09-1489-08	P	ER (ø1.5)	: N29-0205-04
D	ø2.6x3	: N09-1490-08	Q	ER (ø2.0)	: N29-0206-04
E	W (1.7x3.5x0.2)	: N09-0298-05	R	ER (ø2.5)	: N29-0207-04
F	W (2.5x4.5x0.5)	: N19-0367-08	S	M2.6x5	: N35-2605-46
G	W (6x2.1x0.25)	: N19-0524-04	T	M2x3	: N39-2003-46
H	W (2.6x4.7x0.5)	: N19-0891-04	U	M2x4	: N39-2004-46
K	W (5x8x0.5)	: N19-0928-08	Y	M2.6x4	: N39-2604-46
L	W (3.4x8x0.5)	: N19-0929-08	W	ø2.6x14 (Bi-Tap)	: N89-2614-46

X-3WX

Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW(MECHANISM)



A	Ø2.6x5	N09-1220-05	M	Ø2.6x22	N09-1504-08
B	M2x9	N09-1242-08	N	M2x8.5	N09-1505-08
C	Ø2x6	N09-1431-05	P	Ø2.6x10	N09-1506-08
D	Ø2x4	N09-1496-08	Q	STEPPED	N09-1507-08
E	Ø2x5	N09-1497-08	R	STEPPED	N09-1508-08
F	Ø2x8	N09-1498-08	S	STEPPED	N09-1509-08
G	Ø2x12	N09-1499-08	T	STEPPED	N09-1510-08
H	Ø2.6x4	N09-1500-08	U	STEPPED	N09-1511-08
J	Ø2.6x5	N09-1501-08	V	M2x8 (Bi)	N35-2008-46
K	Ø2.6x8	N09-1502-08	Z	Ø2.6x6 (Bi-Top)	N89-2606-46

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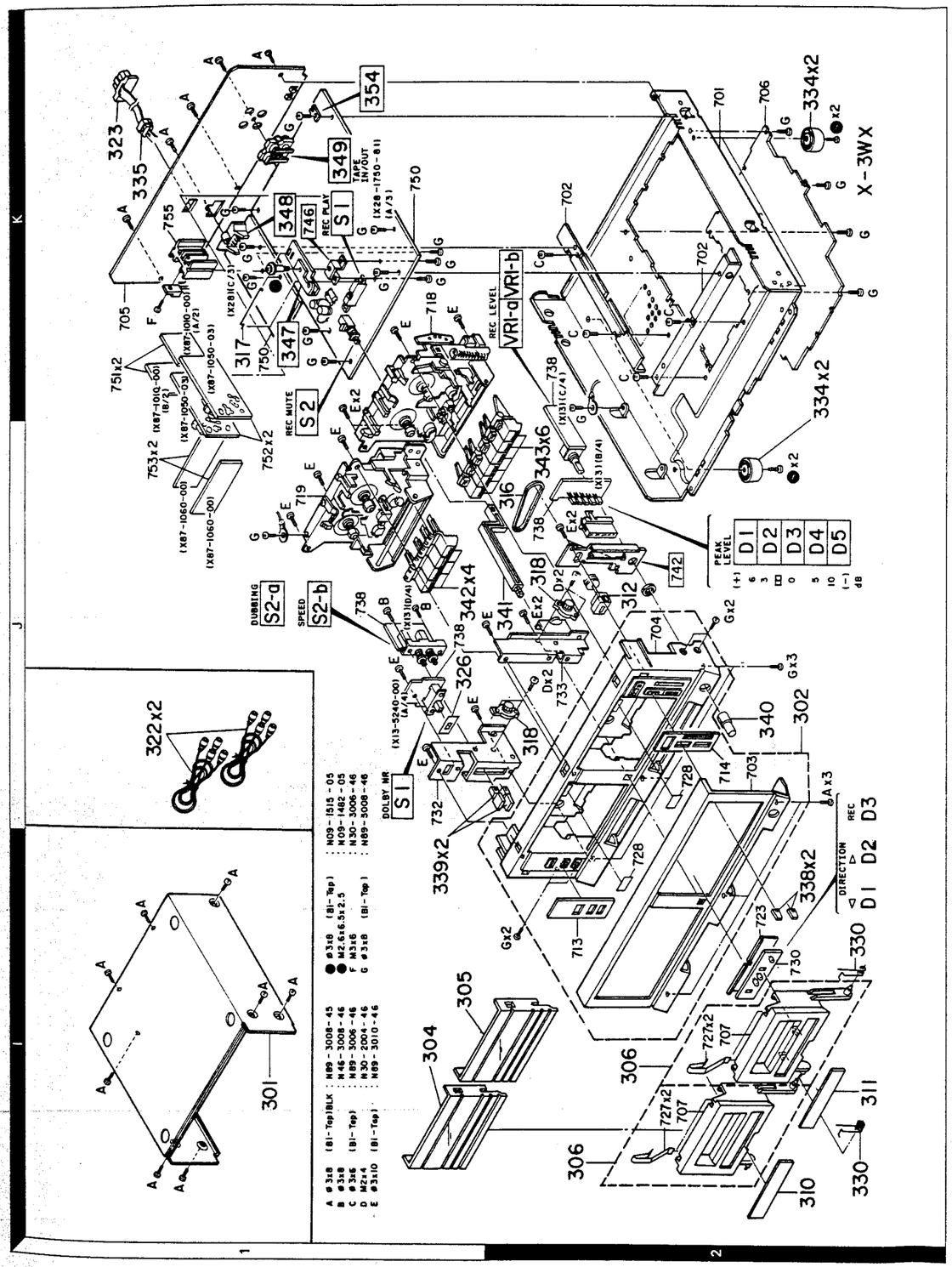
EXPLODED VIEW (UNIT)



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PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			X-3WX			
301	1I		A01-1442-02	METALLIC CABINET		
302	3J	*	A20-5062-02	PANEL ASSY	UMXE	
302	3J	*	A20-5063-02	PANEL ASSY	T	
304	2I	*	A53-0879-04	CASSETTE LID (A)		
305	2I	*	A53-0880-04	CASSETTE LID (B)		
306	2I,3I		A53-0802-04	CASSETTE HOLDER ASSY		
310	3I		B03-1921-04	DRESSING PLATE (A)		
311	3I		B03-1922-04	DRESSING PLATE (B)		
312	2K		B35-0030-05	TAPE COUNTER		
-			B46-0094-03	WARRANTY CARD	U	
-			B46-0095-03	WARRANTY CARD	U	
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0122-13	WARRANTY CARD	E	
-			B46-0123-03	WARRANTY CARD	T	
D1 ,2	3J		B30-1010-05	LED(SLP-281F-50U) DIRECTION		
D3	3J		B30-1012-05	LED(SLP-981C-50) REC		
316	2K		D16-0221-04	BELT		
317	1K		D22-0053-04	SHAFT COUPLING		
318	2J,2K		D39-0173-05	DAMPER		
322	1J		E30-0615-05	AUDIO CORD		
323	1L		E30-1519-05	CORD WITH CONNECTOR(PWR SUPPLY		
326	2J		F19-0335-04	BLIND PLATE		
330	3I		G01-1750-04	TORSION COIL SPRING		
-		*	H01-7379-04	ITEM CARTON CASE	UMXE	
-		*	H01-7380-04	ITEM CARTON CASE	T	
-			H10-1835-02	POLYSTYRENE FOAMED FIXTURE		
-			H10-1836-02	POLYSTYRENE FOAMED FIXTURE		
-			H20-0417-04	PROTECTION COVER(460X370X360)	M	
-			H25-0223-04	PROTECTION BAG (750X350)	UXTE	
-			H25-0232-04	PROTECTION BAG (235X350)		
334	3K,3L		J02-0170-04	FOOT		
⚠ 335	1L		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
338	3J		K27-1392-04	KNOB (LEVER) RVS MODE,DIRECT		
339	2J		K27-1420-04	KNOB (BUTTON) DUBBING MODE		
340	3J		K29-1976-04	KNOB (REC LEVEL)		
341	2K		K29-2054-04	KNOB (REC MUTE)		
342	2K		K29-2292-03	KNOB (BUTTON) A		
343	2K		K29-2293-04	KNOB (BUTTON) B		
S	3K,3L		N09-1515-05	TAPPING SCREW (3X8,+)		
			SWITCH UNIT(X13-5240-00)			
D1 -5	3K		B30-0469-05	LED(SLP-162B) PEAK LEVEL		
VR1	2L		R10-4024-05	POTENTIOMETER(50K) REC LEVEL		
S1	2J		S31-2062-15	SLIDE SWITCH (DOLBY NR)		
S2	1K		S42-2136-05	MULTIPLE PUSH SWITCH(DUB,SPEED		

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RECORD/PLAYBACK UNIT(X28-1750-81)						
C1 ,2			CK45FB1H561K	CERAMIC 560PF K		
C3 -8			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C9			CE04KW1V100M	ELECTRO 10UF 35WV		
C10			CF92FV1H223J	MF 0.022UF J		
C11			CK45FB1H102K	CERAMIC 1000PF K		
C12			CF92FV1H104J	MF 0.10UF J		
C13 ,14			CQ09FS1H681J	POLYSTY 680PF J		
C15 ,16			CC45FSL1H101J	CERAMIC 100PF J		
C17			C91-0811-05	POLYPRO 3300PF J		
C18			CF92FV1H102J	MF 1000PF J		
C19 ,20			CF92FV1H562J	MF 5600PF J		
C21			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C22			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C23			CE04KW1C330M	ELECTRO 33UF 16WV		
C24 ,25			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C26			CE04KW1V220M	ELECTRO 22UF 35WV		
C27 ,28			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C29 ,30			CE04KW1A470M	ELECTRO 47UF 10WV		
C31			CE04KW1E101M	ELECTRO 100UF 25WV		
C32			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C33			CE04KW1V220M	ELECTRO 22UF 35WV		
C34			CE04KW1C101M	ELECTRO 100UF 16WV		
C35 ,36			CE04KW1C470M	ELECTRO 47UF 16WV		
C37			CE04KW1C221M	ELECTRO 220UF 16WV		
C38			CE04KW1E470M	ELECTRO 47UF 25WV		
C39 ,40			CC45FSL1H221J	CERAMIC 220PF J		
C41 -44			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C45 -48			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C49			CE04KW1C330M	ELECTRO 33UF 16WV		
C50			CE04KW1C470M	ELECTRO 47UF 16WV		
C51 ,52			CF92FV1H104J	MF 0.10UF J		
C53 ,54			CE04KW1V100M	ELECTRO 10UF 35WV		
C55			CE04KW1C101M	ELECTRO 100UF 16WV		
C61 ,62			CK45FF1H103Z	CERAMIC 0.010UF Z		
C63			CE04KW1E101M	ELECTRO 100UF 25WV		
C64			CE04KW1V222M	ELECTRO 2200UF 35WV		
C65			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C66			CE04KW1A101M	ELECTRO 100UF 10WV		
C67			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C68			CE04KW1C220M	ELECTRO 22UF 16WV		
C69			CK45FB1H102K	CERAMIC 1000PF K		
347	1K		D10-1351-04	LEVER		
348	1L		E08-0411-05	RECTANGULAR RECEPTACLE		
349	1L		E13-0497-05	PHONO JACK (4P)		
354	2L		E23-0125-05	TERMINAL		
L1 ,2			L39-0126-05	TRAP COIL		
L3 ,4			L39-0107-05	TRAP COIL		
L5			L32-0331-05	FM OSCILLATING COIL		
L7 ,8			L79-0164-05	LC FILTER		
T	1L		N09-1482-05	STEPPED SCREW (M2.6X6.5X2.5)		

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R25			RD14GB2E100J	FL-PROOF RD 10 J 1/4W		
R27			RD14GB2E4R7J	FL-PROOF RD 4.7 J 1/4W		
R28			RD14GB2E151J	FL-PROOF RD 150 J 1/4W		
R29			RD14GB2E221J	FL-PROOF RD 220 J 1/4W		
R124			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
VR1 -4			R12-3096-05	TRIMMING POT.(10K) TAPE SPEED		
VR5 ,6			R12-5047-05	TRIMMING POT.(220K) BIAS ADJ		
S1	1L		S31-4014-05	SLIDE SWITCH (REC PLAY)		
S2	1K		S40-2347-05	PUSH SWITCH (REC MUTE)		
D1 -10			1SS133	DIODE		
D1 -10			1SS176	DIODE		
D13 -33			1SS133	DIODE		
D13 -33			1SS176	DIODE		
⚠ D36 -39			DSM1A1	DIODE		
D40			1SS133	DIODE		
D40			1SS176	DIODE		
D41		*	RD6.2ES(B)	ZENER DIODE		
IC1			AN6263N	IC(DPSS BLANK DETECT)		
IC2			TD62554S	IC(4CH TRANSISTOR ARRAY)		
IC3			LB1416	IC(5PT LED LEVEL METER DRIVER)		
Q1 -6			2SC1740S(Q,R)	TRANSISTOR		
Q1 -6			2SC945(A)(Q,P)	TRANSISTOR		
Q7			2SA733(A)(Q,P)	TRANSISTOR		
Q7			2SA933S(Q,R)	TRANSISTOR		
Q8			2SC1740S(Q,R)	TRANSISTOR		
Q8			2SC945(A)(Q,P)	TRANSISTOR		
Q9			2SC2320(E,F)	TRANSISTOR		
Q11 ,12			2SC1740S(Q,R)	TRANSISTOR		
Q11 ,12			2SC945(A)(Q,P)	TRANSISTOR		
Q13			2SD863	TRANSISTOR		
Q14 -16			2SC2320(E,F)	TRANSISTOR		
Q17			2SA733(A)(Q,P)	TRANSISTOR		
Q17			2SA933S(Q,R)	TRANSISTOR		
Q18			2SC1740S(Q,R)	TRANSISTOR		
Q18			2SC945(A)(Q,P)	TRANSISTOR		
Q19			2SD863	TRANSISTOR		
Q20 -23			2SC1740S(Q,R)	TRANSISTOR		
Q20 -23			2SC945(A)(Q,P)	TRANSISTOR		
Q24 -26			2SA733(A)(Q,P)	TRANSISTOR		
Q24 -26			2SA933S(Q,R)	TRANSISTOR		
Q27 ,28			2SC1740S(Q,R)	TRANSISTOR		
Q27 ,28			2SC945(A)(Q,P)	TRANSISTOR		
Q29			2SA733(A)(Q,P)	TRANSISTOR		
Q29			2SA933S(Q,R)	TRANSISTOR		
Q30 -38			2SC1740S(Q,R)	TRANSISTOR		
Q30 -38			2SC945(A)(Q,P)	TRANSISTOR		
Q39			2SA733(A)(Q,P)	TRANSISTOR		
Q39			2SA933S(Q,R)	TRANSISTOR		
Q40 -42			2SC1740S(Q,R)	TRANSISTOR		
Q40 -42			2SC945(A)(Q,P)	TRANSISTOR		
Q43 ,44			2SC2167	TRANSISTOR		
Q45 ,46			2SD1302(S)	TRANSISTOR		
Q47 ,48			2SC1845(F,E)	TRANSISTOR		
Q49			2SC1740S(Q,R)	TRANSISTOR		

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Q49			2SC945(A)(Q,P)	TRANSISTOR		
Q52 ,53			2SC1740S(Q,R)	TRANSISTOR		
Q52 ,53			2SC945(A)(Q,P)	TRANSISTOR		
Q54			2SD1266	TRANSISTOR		
DOLBY NOISE REDUCTION UNIT(X87-1010-00)						
C1 ,2			CE04FW1C100MEL	ELECTRO 10UF 16WV		
C3 ,4			CE04FW1A221MEL	ELECTRO 220UF 10WV		
C5 ,6			CF92FV1H333J	MF 0.033UF J		
C7 ,8			CE04FW1V4R7MEL	ELECTRO 4.7UF 35WV		
C9 ,10			CF92FV1H103J	MF 0.010UF J		
C11 ,12			CF92FV1H183J	MF 0.018UF J		
C13 ,14			CE04FW1HR33MEL	ELECTRO 0.33UF 50WV		
C15 ,16			CF92FV1H154J	MF 0.15UF J		
C17 ,18			CE04FW1HR47MEL	ELECTRO 0.47UF 50WV		
C19 ,20			CE04GW1HR68MEL	LL-ELEC 0.68UF 50WV		
C21 ,22			CC45FSL1H390J	CERAMIC 39PF J		
C23 ,24			CF92FV1H562J	MF 5600PF J		
C25 ,26			CF92FV1H472J	MF 4700PF J		
C27 ,28			CF92FV1H822J	MF 8200PF J		
C29 ,30			CE04FW1V4R7MEL	ELECTRO 4.7UF 35WV		
C31 ,32			CF92FV1H823J	MF 0.082UF J		
C33 ,34			CF92FV1H154J	MF 0.15UF J		
C35 ,36			CE04FW1HR47MEL	ELECTRO 0.47UF 50WV		
L1 ,2			L39-0106-05	TRAP COIL		
IC1 ,2			HA12058NT	IC(DOLBY B/C NOISE REDUCTION)		
RECORD AMPLIFIER UNIT(X87-1050-03)						
C1			CE04FW1HR22M	ELECTRO 0.22UF 50WV		
C2			CF92FV1H822J	MF 8200PF J		
C3			CF92FV1H183J	MF 0.018UF J		
C4			CE04FW1H010M	ELECTRO 1.0UF 50WV		
C5			CE04FW1V4R7M	ELECTRO 4.7UF 35WV		
C6			CF92FV1H102J	MF 1000PF J		
C7			CE04FW1V4R7M	ELECTRO 4.7UF 35WV		
C8			CF92FV1H203J	MF 0.020UF J		
C9 ,10			CF92FV1H683J	MF 0.068UF J		
C11			CF92FV1H563J	MF 0.056UF J		
C12			CF92FV1H203J	MF 0.020UF J		
C13			CF92FV1H104J	MF 0.10UF J		
C14			CF92FV1H473J	MF 0.047UF J		
C15			CF92FV1H823J	MF 0.082UF J		
C16			CF92FV1H273J	MF 0.027UF J		
C17			CF92FV1H153J	MF 0.015UF J		
L1			L40-4725-29	SMALL FIXED INDUCTOR(4.7MH,J)		
L2			L40-2225-29	SMALL FIXED INDUCTOR(2.2MH,J)		
VR1			R12-3101-05	TRIMMING POT.(22K) REC LEVEL		
IC1			BA6251	IC(7CH TRANSISTOR ARRAY)		
Q1			2SC1685(R,S)	TRANSISTOR		
Q1			2SC1740S(Q,R)	TRANSISTOR		
Q2			2SC1845(F,E)	TRANSISTOR		
Q2			2SC1980(S,T)	TRANSISTOR		

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PLAYBACK AMPLIFIER UNIT(X87-1060-00)						
C1 ,2			CC45FSL1H271J	CERAMIC 270PF J		
C3 ,4			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C5 ,6			CK45FB1H391K	CERAMIC 390PF K		
C7 ,8			CE04KW1A470M	ELECTRO 47UF 10WV		
C9 ,10			CF92FV1H822J	MF 8200PF J		
C11 ,12			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C13 ,14			CF92FV1H183J	MF 0.018UF J		
C15			CE04KW1C330M	ELECTRO 33UF 16WV		
VR1 ,2			R12-3101-05	TRIMMING POT.(22K) PB LEVEL		
IC1			UPC1228HA	IC(PREAMP FOR TAPE EQ X2)		
Q1 ,2			2SC1685(R,S)	TRANSISTOR		
Q1 ,2			2SC1740S(Q,R)	TRANSISTOR		
CASSETTE MECHANISM ASS'Y(A)(D40-0357-05)						
5	2D		D01-0071-08	FLYWHEEL ASSY (H)		
6	1B		D03-0239-08	REEL DISK ASSY (T)		
7	1B		D03-0240-08	REEL DISK ASSY (S)		
22	2C		D10-1482-08	LEVER (STOP)		
23	2C		D10-1483-08	LEVER (FF H)		
24	2C		D10-1484-08	LEVER (REW H)		
25	2B		D10-1485-08	LEVER (REC B)		
26	3B		D10-1552-05	LEVER (EJECT F)		
27	2A		D10-1487-08	LEVER ASSY (SHIFT)		
28	3A		D10-1488-08	LEVER ASSY (IDLER HT)		
29	1C		D10-1489-08	LEVER ASSY (PLAY S)		
30	2D		D10-1490-08	LEVER ASSY (LOCK CAM BS)		
31	3B		D10-1491-08	LEVER ASSY (RC LOCK N)		
32	1B		D10-1492-08	LEVER ASSY (CLUTCH)		
33	1C		D10-1493-08	LEVER ASSY (SOLENOID)		
34	2C		D10-1494-08	ARM (RC LOCK)		
35	1C		D10-1495-08	ARM (TRIGGER)		
36	2C		D10-1496-08	ARM (LOCK H)		
37	2C		D10-1497-08	ARM (AUTO B)		
38	2C		D10-1498-08	ARM (AUTO LOCK)		
39	2D		D10-1499-08	SLIDER (LOCK CAM C)		
40	3D		D10-1500-08	SLIDER (HEAD SHASSIS)		
41	1D		D10-1501-08	SLIDER (LOCK CAM S)		
45	1B		D13-0283-08	GEAR (FF)		
46	2C		D13-0284-08	GEAR (C)		
47	1C		D13-0285-08	GEAR (AUTO)		
48	1C		D13-0286-08	GEAR (AUTO CAM)		
50	2A		D14-0126-08	IDLER (PLAY)		
51	3B		D14-0127-08	PINCH ROLLER ASSY		
52	1C		D15-0237-08	PULLEY (AUTO)		
53	2D		D16-0119-08	BELT (DRIVE)		
54	1D		D16-0120-08	BELT (FR)		
55	2C		D16-0121-08	BELT (AUTO)		
56	1B		D19-0077-08	CLUTCH (AUTO)		
57	3B		D21-1100-08	EXTENSION SHAFT(BUTTON)		
58	1D		D23-0204-08	RETAINER ASSY (CAPSTAN)		
59	2C		D23-0205-08	RETAINER ASSY (HOUSING)		
60	1B		D33-0018-08	LINING (AUTO CLUTCH)		

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64	2A		F07-0471-08	COVER (SWITCH)		
68	2C		G01-1686-08	COMPRESSION SP (FF LEVER)		
69	2C		G01-1687-08	COMPRESSION SP (REW LEVER)		
70	1C		G01-1688-08	COMPRESSION SP (LEVER)		
71	3A		G01-1689-08	COMPRESSION SP (HEAD)		
72	1B		G01-1690-08	COMPRESSION SP (BACK TENSION)		
73	1B		G01-1691-08	COMPRESSION SP (AUTO CLUTCH)		
74	2A		G01-1692-08	TENSION SPRING (SHIFT ARM C)		
75	3A,1D		G01-1693-08	TENSION SPRING (CAM)		
76	3A		G01-1694-08	TENSION SPRING (HEAD SHASSIS)		
77	1D		G01-1695-08	TENSION SPRING (EJECT LEVER)		
78	1B		G01-1696-08	TENSION SPRING (CLUTCH ARM)		
79	3B		G01-1697-08	TENSION SPRING (RC LOCK ARM)		
80	1C		G01-1698-08	TENSION SPRING (SOLENOID ARM)		
81	2B		G01-1699-08	TORSION COIL SP(REC LEVER)		
82	3A		G01-1700-08	TORSION COIL SP(HEAD SHASSIS)		
83	3A		G01-1701-08	TORSION COIL SP(PINCH ROLLER)		
84	2C		G01-1702-08	TORSION COIL SP(LOCK ARM H)		
85	1C		G01-1703-08	TORSION COIL SP(AUTO SENSOR)		
86	2C		G01-1704-08	TORSION COIL SP(AUTO LOCK ARM)		
88	1C		G01-1706-08	TORSION COIL SP(TRIGGER ARM)		
89	2C		G01-1707-08	TORSION COIL SP(RC ARM)		
92	2B		G02-0197-05	FLAT SPRING (PACK T)		
93	1D		G11-1120-08	CUSHION (MOTOR)		
96	2B		J19-2543-08	HOLDER (TRIGGER)		
97	3B		J21-3729-05	MOUNTING HARDWARE (BUTTON B)		
98	3C		J19-2545-08	HOLDER (LEVER A)		
99	2B		J19-2546-08	HOLDER (LEVER B)		
100	3A		J19-2547-08	HOLDER (HEAD BASE)		
101	2C		J19-2548-08	BRACKET (SOLENOID)		
102	1B		J19-2549-08	HOLDER (REEL BASE B)		
103	1D		J21-3646-08	MOUNTING HARDWARE (MOTOR)		
104	3A		J30-0202-05	SPACER (HEAD)		
105	3A		J31-0251-08	COLLAR		
106	1B		J42-0132-08	POWER CORD (FF GEAR)		
107	1C,2C		J42-0133-08	POWER CORD		
109	3B		J31-0252-08	COLLAR (BUTTON)		
-			J61-0307-05	WIRE BAND		
112	1B,1C		N19-0298-05	FLAT WASHER (Ø1.7XØ3.5XO.25		
113	2A		N19-0365-04	FLAT WASHER (Ø1.2XØ3.5XO.25		
114	2C		N19-0524-04	FLAT WASHER (Ø2.1XØ5.0XO.25		
115	2B		N19-0935-08	FLAT WASHER (Ø2.6)		
116	2A		N19-0936-08	FLAT WASHER (REEL DISK)		
117	2B		N19-0937-08	FLAT WASHER (Ø1.9XØ5.0XO.5		
118	1D		N19-0938-08	FLAT WASHER (Ø3.2XØ6.0XO.3		
119	2B,1D		N29-0206-04	E TYPE RETAINING RING (Ø2)		
A	2B		N09-1220-05	SCREW (Ø2.6X5)		
B	3A		N09-1242-08	SCREW (M2X9)		
C	2A		N09-1431-05	SCREW (Ø2X6)		
D	2B,2C		N09-1496-08	SCREW (Ø2X4)		
E	3A		N09-1497-08	SCREW (Ø2X5)		
F	2C		N09-1498-08	SCREW (Ø2X8)		
G	2C		N09-1499-08	SCREW (Ø2X12)		

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H	2B,1D		N09-1500-08	SCREW (Ø2.6X4)		
J	3B		N09-1501-08	SCREW (Ø2.6X5)		
K	1B		N09-1502-08	SCREW (Ø2.6X8)		
M	2C		N09-1504-08	SCREW (Ø2.6X22)		
N	3A		N09-1505-08	SCREW (M2X8.5)		
P	2C		N09-1506-08	SCREW (Ø2.6X10)		
Q	3A,3B		N09-1507-08	SCREW		
R	1D		N09-1508-08	SCREW		
S	2C		N09-1509-08	SCREW		
T	2C		N09-1510-08	SCREW		
U	1D		N09-1511-08	SCREW (MOTOR)		
S1	2B		S46-1061-08	LEAF SWITCH (CRO2)		
S2	2B		S46-1062-08	LEAF SWITCH (PB)		
S3	2C		S46-1063-08	LEAF SWITCH (FF,REW)		
130	3A		T32-0308-05	ERASE HEAD (DUMMY)		
131	3A		T34-0313-08	REC/PLAY HEAD		
132	1D		T42-0074-08	MOTOR ASSY		
133	2C		T94-0087-08	SOLENOID COIL		
CASSETTE MECHANISM ASS'Y(B)(D40-0323-05)						
140	2H		A11-0156-08	SUB CHASSIS ASSY (C)		
141	2G		A11-0157-08	SUB CHASSIS ASSY (B)		
145	3F		D01-0068-08	FLYWHEEL ASSY (R)		
146	3F		D01-0069-08	FLYWHEEL ASSY (F)		
147	2G		D03-0237-08	REEL DISK ASSY (TAKE UP)		
148	2G		D03-0238-08	REEL DISK ASSY (SUPPLY)		
149	2G		D10-1413-08	LEVER (REC)		
150	2G		D10-1414-08	LEVER (EJECT)		
151	3F		D10-1415-08	LEVER (PLAY)		
152	2F		D10-1416-08	LEVER (MUTE SWITCHOVER		
153	3F		D10-1417-08	LEVER (PAUSE)		
154	3G		D10-1418-08	LEVER (REVERSE INHIBIT		
155	3G		D10-1419-08	LEVER (REVERSE)		
156	2G		D10-1420-08	LEVER (REC B)		
157	2E		D10-1421-08	LEVER (PAUSE KEY)		
158	2E		D10-1422-08	LEVER (PLAY KEY)		
159	2G		D10-1423-08	LEVER		
160	2G		D10-1424-08	LEVER (PAUSE)		
161	2G		D10-1425-08	LEVER (AUTO RELEASE)		
162	2H		D10-1426-08	LEVER (AUTO KICK)		
163	3F		D10-1427-08	LEVER (DIRECTION)		
164	1H		D10-1428-08	LEVER (REC A)		
165	1G		D10-1429-08	LEVER		
166	2F		D10-1430-08	LEVER		
167	2G		D10-1431-08	LEVER (REC INHIBIT,B)		
168	1G		D10-1432-08	LEVER (REC INHIBIT)		
169	2G		D10-1433-08	LEVER (REC INHIBIT)		
170	1G		D10-1434-08	LEVER (MODE SWITCHOVER		
171	1G		D10-1435-08	LEVER (MANUAL)		
172	1G		D10-1436-08	LEVER (F)		
173	1F,1G		D10-1437-08	LEVER (R)		
174	1G		D10-1438-08	LEVER (R)		
175	1G		D10-1439-08	LEVER ASSY (SWITCHOVER,A)		
176	1F		D10-1440-08	LEVER ASSY (PLAY GEAR,F)		

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177	1F		D10-1441-08	LEVER ASSY (PLAY GEAR,R)		
178	2G		D10-1442-08	LEVER ASSY (PLAY)		
179	3F		D10-1443-08	LEVER ASSY (INVERT)		
180	2F		D10-1444-08	LEVER ASSY (HEAD SWITCHOVER		
181	2H		D10-1445-08	LEVER ASSY (PAUSE)		
182	2G		D10-1446-08	LEVER ASSY		
183	1G		D10-1447-08	LEVER ASSY (MODE A)		
184	1H		D10-1448-08	LEVER ASSY (AUTO A)		
185	3E		D10-1449-08	SLIDER (R/P SW)		
186	2H		D10-1450-08	SLIDER ASSY (MOTOR SW)		
187	2G		D10-1451-08	SLIDER ASSY (LOCK)		
188	2G		D10-1452-08	SLIDER ASSY (DPSS)		
189	2F		D10-1453-08	SLIDER ASSY (PINCH ROLLER)		
190	2F		D10-1454-08	SLIDER ASSY		
191	1F		D10-1455-08	SLIDER (PAUSE)		
192	2H		D10-1456-08	SLIDER (STOP)		
193	2H		D10-1457-08	SLIDER (FF)		
194	2H		D10-1458-08	SLIDER (PLAY)		
195	2H		D10-1459-08	SLIDER (REW)		
196	2H		D10-1460-08	SLIDER (REC PLATE)		
197	2G		D10-1461-08	SLIDER (AUTO)		
198	2G		D10-1462-08	SLIDER (CASSETTE LID LOCK		
199	2G		D10-1463-08	SLIDER (REC)		
200	2G		D10-1464-08	SLIDER (REC INHIBIT,A)		
201	1H		D10-1465-08	SLIDER (REC INHIBIT,B)		
202	1G		D10-1466-08	SLIDER (MODE B)		
203	1G		D10-1467-08	SLIDER		
204	3E		D10-1468-08	ROD (OPERATION KEY)		
206	1G		D12-0108-08	CAM		
207	3F		D13-0272-08	GEAR (PLAY)		
208	2G		D13-0273-08	GEAR (PAUSE CAM)		
209	2H		D13-0274-08	GEAR (REVERSE CAM)		
210	1H,2H		D13-0275-08	GEAR (PLAY)		
211	2H		D13-0276-08	GEAR (REVERSE B)		
212	1H		D13-0277-08	GEAR (AUTO STOP)		
213	2G		D13-0278-08	GEAR (FF)		
214	2E		D13-0279-08	GEAR (SEGMENT)		
215	2E		D13-0280-08	GEAR (HEAD)		
216	2H		D13-0281-08	GEAR (REVERSE C)		
217	2F		D14-0124-08	PINCH ROLLER ASSY (F)		
218	2E		D14-0125-08	PINCH ROLLER ASSY (R)		
219	2F		D15-0235-08	PULLEY ASSY (FR)		
220	3F		D16-0117-08	BELT (MAIN)		
221	3F		D16-0118-08	BELT (FRB)		
222	2G		D19-0076-08	CLUTCH		
223	3E,3F		D23-0203-08	RETAINER (FLYWHEEL)		
224	1H		D30-0016-08	BRAKE		
225	2F		D90-0027-08	STEEL BALL (1.2)		
229	2E		F20-0353-08	INSULATING BOARD		
230	2E		F31-0150-08	REINFORCING HARDWARE		
235	1G		G01-1630-08	COMPRESSION SP (LOCK PLATE)		
236	3F		G01-1631-08	COMPRESSION SP (FLYWHEEL)		
237	2G		G01-1632-08	COMPRESSION SP (AUTO)		
238	1H		G01-1633-08	COMPRESSION SP (AUTO LEVER)		

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239	2E		G01-1634-08	COMPRESSION SP (AZIMUTH)		
240	2G		G01-1635-08	COMPRESSION SP (AUTO B)		
241	2E,2F		G01-1636-08	COMPRESSION SP (PINCH ROLLER)		
242	3E		G01-1637-08	TENSION SPRING (SWITCHOVER)		
243	2F		G01-1638-08	TENSION SPRING		
244	2G		G01-1639-08	TENSION SPRING (PLAY LEVER)		
245	2F		G01-1640-08	TENSION SPRING (PAUSE)		
246	2H		G01-1641-08	TENSION SPRING (DPSS)		
247	2H		G01-1642-08	TENSION SPRING (LOCK)		
248	2F		G01-1643-08	TENSION SPRING (FR)		
249	1F,2G		G01-1644-08	TENSION SPRING (AUTO INHIBIT)		
250	1H		G01-1645-08	TENSION SPRING (BRAKE)		
251	1H		G01-1646-08	TENSION SPRING (REC A)		
252	2G		G01-1647-08	TENSION SPRING (SLIDER R)		
253	1G		G01-1648-08	TENSION SPRING (MODE A)		
254	1G		G01-1649-08	TENSION SPRING (MODE B)		
255	1G		G01-1650-08	TENSION SPRING (D LEVER)		
256	1F,2F		G01-1651-08	TENSION SPRING		
257	2G,3G		G01-1652-08	TENSION SPRING (TRIGGER LEVER)		
258	2F		G01-1653-08	TENSION SPRING (PINCH ROLLER)		
259	1G		G01-1654-08	TENSION SPRING (REC INHIBIT)		
260	3F		G01-1655-08	TENSION SPRING		
261	2G		G01-1656-08	TENSION SPRING (PAUSE)		
262	2F		G01-1657-08	TORSION SPRING (PINCH ROLLER,F		
263	2E		G01-1658-08	TORSION SPRING (PINCH ROLLER,R		
264	2E		G01-1659-08	TORSION SPRING (OPERATION KEY)		
265	2H		G01-1660-08	TORSION SPRING (REC)		
266	2E		G01-1661-08	TORSION SPRING (GEAR SEGMENT)		
267	2G		G01-1662-08	TORSION SPRING (REC INHIBIT C)		
268	2G		G01-1663-08	TORSION SPRING (MODE A LEVER)		
269	2H		G01-1664-08	TORSION SPRING (FF KEY)		
270	1G		G01-1665-08	TORSION SPRING (REC INHIBIT)		
271	1G		G02-0367-08	FLAT SPRING		
272	2F		G02-0368-08	FLAT SPRING		
276	3F		J19-0306-05	LEAD HOLDER		
277	2E		J19-2538-08	HOLDER (HEAD BASE)		
278	2E		J21-3638-08	MOUNTING HARDWARE (OP KEY)		
279	2E		J21-3639-08	MOUNTING HARDWARE (HEAD)		
280	1G		J21-3640-08	MOUNTING HARDWARE (MODE)		
281	3E		J21-3641-08	MOUNTING HARDWARE (MOTOR)		
282	3F		J31-0250-08	COLLAR		
283	2H		J90-0154-08	GUIDE		
A	2E		N09-1487-08	SCREW (AZIMUTH)		
B	2E		N09-1488-08	SCREW (Ø1.6X5.5)		
C	2H		N09-1489-08	SCREW (Ø2X5)		
D	2G,3G		N09-1490-08	SCREW (Ø2.6X3)		
E	1G,2G		N19-0298-05	FLAT WASHER (Ø1.7XØ3.5X2)		
F	3F		N19-0367-08	FLAT WASHER (Ø2.5XØ4.5X2)		
G	2E,2F		N19-0524-04	FLAT WASHER (Ø6XØ2.1XO.25)		
H	2E		N19-0891-04	FLAT WASHER (Ø2.6XØ4.7XO.5)		
K	1G		N19-0928-08	FLAT WASHER (Ø5.8XO.5)		
L	2E		N19-0929-08	FLAT WASHER (Ø3.4XØ8XO.5)		
M	2G		N19-0930-08	FLAT WASHER (Ø3XØ1.7XO.2)		
N	2G,2G		N19-0931-08	FLAT WASHER (Ø1.7XØ3.5XO.2)		

E: Scandinavia & Europe H:Audio Club K: USA P: Canada W:Europe
T: England U: PX(Far East, Hawaii)
UE: AAFES(Europe) X: Australia M: Other Areas

⚠ indicates safety critical components.

PARTS LIST

* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
P	2F,1G		N29-0205-04	E TYPE RETAINING RING (Ø1.5)		
Q	1F,1G		N29-0206-04	E TYPE RETAINING RING (Ø2.0)		
R	2G,1H		N29-0207-04	E TYPE RETAINING RING (Ø2.5)		
S4	3G		S46-1057-08	LEAF SWITCH (MOTOR IN/OFF)		
S5 ,6	1F		S46-1056-08	LEAF SWITCH (METAL,CRO2)		
S7	2G		S46-1058-08	LEAF SWITCH (PLAY)		
S8	1F		S46-1058-08	LEAF SWITCH (DIRECTION)		
288	2E		T34-0312-08	REC/PLAY HEAD		
289	3E		T42-0071-08	DC MOTOR ASSY		

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X-3WX

SPECIFICATIONS

Type.....Stereo-Double Cassette Deck
Track system.....4-Track,
2-Channel Stereo/Mono,
Recording/Playback
Recording system.....AC Bias System
(Bias Frequency: 105 kHz)
Erasing system.....AC System
Tape speed.....4.76 cm/sec (1-7/8 ips)
Heads
Record and playback.....Permalloy Head
Playback.....Head Permalloy Head
ERASE.....Double Gap Ferrite Head
Motor.....Electronically Controlled
DC Motor × 2
Fast winding time.....Approx. 105 seconds with
(C-60 tape)
Frequency response:
Normal tape.....20 Hz to 15,000 Hz
(30 Hz to 14,000 Hz,
±3 dB)
CrO_2 tape.....20 Hz to 16,000 Hz
(30 Hz to 15,000 Hz,
±3 dB)
Metal tape.....20 Hz to 16,000 Hz
(30 Hz to 15,000 Hz,
±3 dB)

Signal-to-Noise ratio:
Dolby C type NR ON.....72 dB (Metal Tape)
Dolby B type NR ON.....65 dB (Metal Tape)
Dolby NR OFF.....57 dB (Metal Tape)
Harminic distortion.....Less than 1.0%
Wow and flutter.....0.09% (W.R.M.S.)
±0.18% (DIN)
Input sensitivity/impedance:
LINE × 2.....77.5 mV/50 kohms
Output level/load impedance:
LINE × 2.....270 mV/3.9 kohms
Dimensions.....W: 340 mm
H: 119 mm
D: 356 mm
Weight.....Net 4.2 kg
Reference tapes.....Normal: KENWOOD ND-54
or TDK AD C-60
CrO_2: KENWOOD CD-54 or
TDK SA C-60
Metal: KENWOOD MD-54 or
TDK MA C-60

Kenwood follows a policy of continuous advancements in development
For this reason specifications may be changed without notice
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Noise reduction circuit made under license from Dolby Laboratories Licensing Corporation.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement.
Pour cette raison, les spécifications sont sujettes à modifications sans préavis.
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Le système de réduction du bruit de fond est fabriqué sous license des Dolby Laboratories.

Kenwood strebt ständige Verbesserungen in der Entwicklung an.
Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.
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Note:
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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